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PRE-APPEAL BRIEF REQUEST FOR REVIEWDocket Number (Optional)
32860-000181/US

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On _____

Signature _____

Typed or printed name _____

Application Number
10/030,870Filed
October 19, 2001First Named Inventor
Robert BOESNECKERArt Unit
2615Examiner
Devona E. Faulk

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

☒ attorney or agent of record.
Registration number 34,313.

☐ attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34 _____

Signature

Donald J. Daley

Typed or printed name

703-668-8000

Telephone number

June 22, 2006

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted.



PATENT
32860-000181/US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Robert BOESNECKER CONF. NO.: 8899
SERIAL NO.: 10/030,870 GROUP: 2615
FILED: October 19, 2001 EXAMINER: D. E. Faulk
FOR: FLAT SURFACE LOUDSPEAKER, AND A METHOD FOR ITS
OPERATION

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314
Mail Stop AF

June 22, 2006

REASONS FOR PRE-APPEAL BRIEF REQUEST FOR REVIEW

Dear Sir:

Further to the concurrent filing of the attached Notice of Appeal, the following remarks are submitted in connection with the above-identified patent application under the Pre-Appeal Brief Review. Claims 1-12 are pending in the present application. Claims 1 and 4 are independent claims.

MATERIAL UNDER REVIEW

I. REVIEW IS REQUESTED FOR THE REJECTION OF CLAIMS 1-6, 8, AND 10 UNDER 35 U.S.C. § 103(A) OVER AZIMA AND MAKIVIRTA.

Review is requested for the rejection of claims 1-6, 8 and 10 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Azima et al. (U.S. Patent No. 6,198,831, hereinafter "Azima") in view of Makivirta et al. (EP 0 567 061, hereinafter "Makivirta").

As set forth in Applicant's previous response, Azima discloses a panel form combination loudspeaker/microphone for use in interactive environment. The loudspeaker/microphone combination comprises a rectangular frame carrying a resilient suspension around its inner periphery supporting a distributed mode sound radiating panel. Particularly, a transducer (9) is

mounted only and exclusively on (or in) the panel (9) at a predetermined location. Azima at FIGS. 3, 4. The position of the predetermined location is calculated such that bending waves are launched into the panel (2). The bending waves cause the panel (2) to resonate and radiate an acoustic output. The transducer (9) is driven by a signal amplifier. For use as a sound receiver or microphone the panel (2) also carries a pair of vibration transducers (63) coupled in parallel. The pair of vibration transducers (63) drive a signal receiver and conditioner (65) connected to an output. Another vibration transducer (63) on the panel (2) is coupled to drive a filter/correlator (64). The output of the filter/correlator (64) is fed to the signal receiver and conditioner (65) for signal correction. *Id.* at col. 5, ll. 5-27.

On one hand, the signal correction disclosed in Azima applies to the **microphone use of the panel** not the loudspeaker use. Azima is silent about the details of the correction method performed by the filter/correlator (64) driven by a vibration transducer (63) during loudspeaker use of the panel (2). Even if details of the signal correction method were disclosed, Azima fails to teach how a signal is corrected and how that correction is applied to the input signal of the panel (2) when used as a loudspeaker.

In addition, the skilled artisan would have no reason nor would he/she have been motivated to look to correct the input signal for the panel when used as a loudspeaker as in Azima. **The acoustic output of the loudspeaker disclosed in Azima is already optimized by placing a transducer (9) on (or in) the panel (2) at a predetermined location.** According to the disclosure the sound-output is best, if the position of the transducer (9) is calculated as described in U.S. patent application serial nos. 09/011,773, 09/011,770 and 09/011,831. Azima at col. 2, ll. 48-56. Thus, given the disclosure of Azima the skilled artisan would have no reason, nor would he/she have been motivated, to look to improve the sound quality of the panel loudspeaker because according to Azima the output of the loudspeaker is already optimized.

Moreover, even assuming *arguendo* that the skilled artisan did have reason to look to improve the sound quality of the panel loudspeaker of Azima, Azima fails to suggest that the signal correction applied in the microphone use of the panel could or should be applied during loudspeaker use of the panel (2).

Makivirta discloses a method and a system for reproducing audio frequencies in a sound reproduction system. The sound reproduction system comprises at least one wideband one-way loudspeaker (5) mounted in a loudspeaker cabinet. The frequency response (1) of the

loudspeaker system is equalized by a filter (4). The filter (4) is a wideband filter. In operation, the wideband filter (4) measures the frequency response (1) of the loudspeaker system and approximates inverse response (2) based on the measurement results. The inverse response (2) is used by the filter (4) to equalize the variations of the frequency response (1) of the loudspeaker (5).

In Makivirta, an FIR filter is designed such that the response is an inverse of the amplitude response of the loudspeaker system between selected frequencies. The wideband filter (4), substantially covering the desired audio range and being a digital filter, is implemented in a digital signal processor programmed to implement a desired transfer function. That is, Makivirta refers to a sound reproduction system with a **conventional membrane-type loudspeaker** (i.e., sound radiating from a **point-like sound source**). The conventional membrane-type loudspeaker is arranged in a loudspeaker cabinet such as the housing of a TV set. In this type of sound reproduction system, sound is corrected because the audio output of conventional membrane-loudspeakers is heavily influenced by its installation in a cabinet, e.g., housing of a TV set or a mobile telephone.

At the time the invention was made, however, the skilled artisan would never have expected that equalization of the frequency response of a conventional membrane-type loudspeaker system as disclosed in Makivirta may have similar effects when applied to a flat panel loudspeaker because none of Azima or Makivirta mention or suggest that the disclosed equalization method is appropriate for flat panel loudspeakers.

As will be appreciated from the above discussion, from both a technical and a physical point of view conventional membrane-type loudspeakers (as in Makivirta) and flat panel loudspeakers (as in Azima) are very different. For at least this reason, one skilled in the relevant art would not have appreciated that the same signal correction methods could be equally applicable to both loudspeaker types, at the time the invention was made.

For at least the above reasons, Applicant submits that the skilled artisan would clearly not have been motivated to look to Makivirta for the deficiencies of Azima with regard to claims 1 and 4. Thus, the rejection under 35 U.S.C. § 103(a) is improper because the Examiner has failed to establish a *prima facie* case of obviousness for the alleged combination of Makivirta and Azima because the Examiner has failed to provide the requisite motivation for combining the references.

RESPONSE TO EXAMINER'S REBUTTAL ARGUMENTS

The Examiner rebuts Applicant's argument that Azima applies to microphone use of a loudspeaker panel and not loudspeaker use by referring Applicant to the distributed mode panel (2) in FIGS. 1-3 and col. 5, ll. 24-22 of Azima. While Applicants do not necessarily agree that Azima mentions the use of distributed mode panel 2 as a loudspeaker, Azima is still silent as to whether the correction method is even performed by the filter/correlator 64 during loudspeaker use of the panel 2. Moreover, Azima fails to teach the details of the correction method during microphone use of the panel 2, let alone, how the correction method could be applied to the panel 2 when used as a loudspeaker. Therefore, regardless of whether Azima teaches that the panel (2) is used as a loudspeaker, Azima still fails to disclose the method of claim 1.

The Examiner rebuts Applicant's argument that the skilled artisan would not have been motivated to correct the input signal for the panel in Azima contending that the claim language does not specifically recite that the correction is done to the input signal for the panel. *Office Action* at 2. Apparently, the Examiner misunderstands the direction of Applicants arguments. The argument to which the Examiner refers addresses the Examiner's lack of motivation for combining and/or modifying Azima with the teachings of Makivirta. Regardless of the limitations present in claim 1, for example, to render claim 1 *prima facie* obvious, the Examiner must establish that one of ordinary skill in the relevant art would have looked to Makivirta for the deficiencies of Azima with respect to claim 1. M.P.E.P. § 706.02(j) However, the Examiner responded by merely stating that a limitation is allegedly not present in claim 1, and therefore, Applicants arguments are not persuasive. This was not the point of this portion of Applicant's arguments. As noted above, Applicant intended to attack the Examiner's lack of motivation for modifying Azima with the teachings of Makivirta, not the teachings of Azima and Makivirta relative to claim 1. Because the Examiner has failed to properly respond to this portion of Applicant's arguments, Applicant requests that this portion of Applicant's arguments set forth in Applicant's December 22, 2005 Request for reconsideration (the contents of which are incorporated herein by reference) be reviewed and responded to appropriately.

In rebuttal to Applicant's argument that the skilled artisan would not have expected that equalization of the frequency response of a conventional type speaker as disclosed in Makivirta would have similar effects when applied to a flat panel loudspeaker, the Examiner contends, "a recitation of the intended use of the claimed invention must result in a structural difference

between a claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art." *Office Action* at 3. Again, the Examiner has confused Applicant's arguments attacking the Examiner's failure to establish a *prima facie* case of obviousness for combining Azima and Makivirta with an argument that a particular feature is absent from Azima and/or Makivirta. This was also not the point of this portion of Applicant's arguments. Applicant intended to express that the skilled artisan would not have looked to Makivirta for the deficiencies of Azima with respect to claim 1, for example; a requirement for establishing that a claim is *prima facie* obvious. M.P.E.P. § 706.02(j). Respectfully, Applicant requests that this portion of Applicant's arguments set forth in Applicant's December 22, 2005 Request for Reconsideration be reviewed and responded to appropriately.

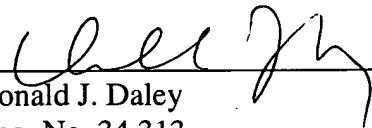
CONCLUSION

In view of the remarks, reconsideration of the objections and rejections and allowance of each of claims 1-12 in connection with the present application is earnestly solicited. Should there be any outstanding matters that need to be resolved in the present application, the Pre-Appeal Brief Review Board is respectfully requested to contact the undersigned at the telephone number. If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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By


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